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=> s beta amino acid
       1460741 BETA
          1325 BETAS
       1460818 BETA
                  (BETA OR BETAS)
       1123081 AMINO
            44 AMINOS
       1123099 AMINO
                  (AMINO OR AMINOS)
       4390075 ACID
       1579075 ACIDS
       4889585 ACID
                  (ACID OR ACIDS)
L1        2949 BETA AMINO ACID
                  (BETA(W)AMINO(W)ACID)

=> s alpha beta unsaturated carbonyl compound
       1693145 ALPHA
          2493 ALPHAS
       1693252 ALPHA
                  (ALPHA OR ALPHAS)
       1460741 BETA
          1325 BETAS
       1460818 BETA
                  (BETA OR BETAS)
         56956 UNSATURATED
             1 UNSATURATEDS
         56957 UNSATURATED
                  (UNSATURATED OR UNSATURATEDS)
        228182 UNSATD
            13 UNSATDS
        228185 UNSATD
                  (UNSATD OR UNSATDS)
        243085 UNSATURATED
                  (UNSATURATED OR UNSATD)
        175092 CARBONYL
```

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         27670 CARBONYLS
        183368 CARBONYL
                 (CARBONYL OR CARBONYLS)
        122915 COMPOUND
        872009 COMPOUNDS
        977161 COMPOUND
                 (COMPOUND OR COMPOUNDS)
       1165677 COMPD
       1740256 COMPDS
       2490661 COMPD
                 (COMPD OR COMPDS)
       2929224 COMPOUND
                 (COMPOUND OR COMPD)
L2        1924 ALPHA BETA UNSATURATED CARBONYL COMPOUND
                 (ALPHA(W)BETA(W)UNSATURATED(W)CARBONYL(W)COMPOUND)

=> s L1 and L2
L3          11 L1 AND L2

=> s Lithium amide
        325716 LITHIUM
           370 LITHIUMS
        325844 LITHIUM
                 (LITHIUM OR LITHIUMS)
        130578 AMIDE
         82097 AMIDES
        178013 AMIDE
                 (AMIDE OR AMIDES)
L4        1488 LITHIUM AMIDE
                 (LITHIUM(W)AMIDE)

=> s L3 and L4
L5           1 L3 AND L4

=> d L5 bib abs

L5   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   1997:104679  CAPLUS
DN   126:199800
TI   Asymmetric synthesis of β -amino acids
     via the Michael addition of chiral metal amides
AU   Davies, Stephen G.; Ichihara, Osamu
CS   Dyson Perrins Lab., Univ. Oxford, Oxford, UK
SO   Yuki Gosei Kagaku Kyokaishi (1997), 55(1), 42-50
     CODEN: YGKKAE; ISSN: 0037-9980
PB   Yuki Gosei Kagaku Kyokai
DT   Journal; General Review
LA   Japanese
AB   A review with 32 refs . A Li amide conjugate addition approach to the
     synthesis of β -amino acid derivs. is
     described. Li amides derived from α-methylbenzylamine undergo
     highly diastereoselective 1,4-conjugate addition to a variety of .
     alpha.,β -unsatd. carbonyl
     compds. The benzyl substituents on the amino group can be readily
     removed by hydrogenolysis to afford a wide range of β -
     amino acid derivs. The enolate intermediate can be
     trapped by electrophiles such as alkyl halides and
     (camphorsulfonyl)oxaziridine to give α-alkyl and α-hydroxy-.
     beta.-amino acids in a highly stereocontrolled
     fashion. The synthetic utility of the methodol. is demonstrated by the
     syntheses of nos. of natural products and other important synthetic
     intermediates such as taxol C-13 side chain, cispentacin, and
     (+)-negamycin. The origin of the stereoselectivity is briefly discussed.
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=> s chiral ligand
        116143 CHIRAL
            16 CHIRALS
        116147 CHIRAL
                  (CHIRAL OR CHIRALS)
        322807 LIGAND
        219575 LIGANDS
        439244 LIGAND
                  (LIGAND OR LIGANDS)
L6        3787 CHIRAL LIGAND
                  (CHIRAL(W)LIGAND)

=> s L4 and L6
L7          18 L4 AND L6

=> s L7 and L2
L8           0 L7 AND L2

=> s L4 and L6
L9          18 L4 AND L6

=> d L9 1-18 bib abs

L9   ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:1174237  CAPLUS
DN   145:471699
TI   Bidentate planar-chiral modular ferrocenyl phosphines, thiols and amines
     as ligands for transition metal catalyzed asymmetric reactions and process
     for preparation thereof
IN   Pugin, Benoit; Feng, Xiangdong
PA   Solvias A.-G., Switz.
SO   PCT Int. Appl., 59pp.
     CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.          KIND   DATE       APPLICATION NO.         DATE
     ----------          ----   --------   --------------------    --------
PI   WO 2006117369        A1    20061109   WO 2006-EP61973         20060502
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRAI CH 2005-776          A     20050503
OS   MARPAT 145:471699
AB   Ferrocenes [(η5-1-R-2-Y-3-X1-4-X2-C5H)Fe(η5-C5H5-nR1n)] [1, n =
     0-5, R1 = C1-4 alkyl, C6-10 aryl, C7-12 (alk)aralkyl, preferably n = 0; R
     = H, halo, silyl, optionally alkylthio-, alkoxy-, aryloxy-,
     silyl-substituted C1-20 organyl, preferably R = C1-4 alkyl(thio) C1-4
     alkoxy, PhO, Me3Si; Y = C-bound chiral directing group containing vinyl, Me,
     Et, alkoxymethyl, siloxymethyl aminomethyl groups, preferably Y =
     1-methoxyethyl, 1-dimethylaminoethyl, (dimethylamino)phenylmethyl,
     2-oxazolinyl, 1,3-dioxan-2-yl; X1, X2 = optionally chiral phosphino,
     P-heterocyclyl, SH, organylthio, preferably X1 ≠ X2], useful as
     ligands for transition metal-catalyzed asym. reactions, preferably for
     asym. hydrogenation, were prepared by a process comprising lithiation of
     trisubstituted ferrocenes [(η5-1-R-2-Y-3-Z-C5H2)Fe(η5-C5H5-nR1n)]
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(2, Z = halo, same R, R1, Y) by lithium or magnesium secondary amides to [(η5-1-R-2-Y-3-Z-4-MC5H)Fe(η5-C5H5-nR1n)] (3, M = Li, halomagnesium) followed by introduction of X2 by reaction with X2Z1 (Z1 = halo) to give [(η5-1-R-2-Y-3-Z-4-X2C5H)Fe(η5-C5H5-nR1n)] (4, same R, Y, X, Z) with subsequent metalation by alkyllithium or Grignard reagents and analogous introduction of X1. In an example, (2S)-1-(dicyclohexylphosphino)-2-diphenylphosphino-3-[(1R)-1-(dimethylaminoethyl)]ferrocene (B1) was prepared by reaction of (1R)-1-bromo-2-[(1R)-1-(dimethylaminoethyl)]ferrocene with lithium 2,2,6,6-tetramethylpiperidide and Cy2PCl, followed by BuLi lithiation of the resulting compound 2 [R = H, Y = (R)-CHMe(NMe2), Z = Br, X2 = PCy2] and reaction with Ph2PCl. In another example, the prepared compound B1 was used as ligand in rhodium-catalyzed asym. hydrogenation of di-Me itaconate, affording di-Me (R)-methylsuccinate with 100% conversion and 95% ee.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:725669 CAPLUS
DN 145:335747
TI Chiral ligand-controlled asymmetric conjugate amination of enoates with lithium mesitylmethyl(trimethylsilyl)amide
AU Sakai, Takeo; Doi, Hirohisa; Tomioka, Kiyoshi
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, 606-8501, Japan
SO Tetrahedron (2006), 62(35), 8351-8359
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier B.V.
DT Journal
LA English
OS CASREACT 145:335747
AB Lithium mesitylmethyl(trimethylsilyl)amide behaved as a nice amination agent in a chiral ligand-controlled conjugate addition reaction of tert-Bu cinnamate to give the conjugate amination product with 99% ee in 90% yield. Other acyclic and cyclic enoates were also aminated in reasonably high enantioselectivity, while the deprotonation of abstractable proton of enoates caused yield loss of the conjugate amination products, due to the bulkiness and enriched basicity of the lithium amide. Although such steric bulkiness made hard the hydrogenolytic cleavage of a mesitylmethyl-N bond of the adducts, a new protocol comprising N-chlorination-regioselective dehydrochlorination-transoximation was developed for N-dearylmethylation, giving 3-aminoalkanoates in reasonably good yields.

RE.CNT 107 THERE ARE 107 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:458921 CAPLUS
DN 145:145349
TI Asymmetric Synthesis of Intermediates for Otamixaban and Premafloxacin by the Chiral Ligand-Controlled Asymmetric Conjugate Addition of a Lithium Amide
AU Sakai, Takeo; Kawamoto, Yoshito; Tomioka, Kiyoshi
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Yoshida, Sakyo-ku, Kyoto, 606-8501, Japan
SO Journal of Organic Chemistry (2006), 71(12), 4706-4709
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 145:145349
AB A chiral ligand-controlled conjugate addition reaction of Li benzyl(trimethylsilyl)amide with tert-Bu enoates gave Li enolates that were then treated with electrophiles, giving anti-alkylation products with ee ≤ 98%. The benzyl group on the amino nitrogen was removed by

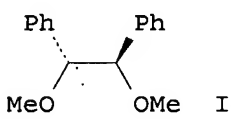
the oxidation of secondary amine to imine and transoximation to give 3-aminoalkanoates in good yields. The products are the possible key intermediates of otamixaban and premafloxacin.

RE.CNT 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:208484 CAPLUS
DN 144:432611
TI 3-Aminopyrrolidine lithium amides as chiral ligands for alkyllithium derivatives: synthesis, NMR analysis, and computational study of their mixed aggregates
AU Harrison-Marchand, Anne; Valnot, Jean-Yves; Corruble, Aline; Duguet, Nicolas; Oulyadi, Hassan; Desjardins, Stephanie; Fressigne, Catherine; Maddaluno, Jacques
CS Laboratoire des Fonctions Azotees et Oxygenees Complexes, Universite de Rouen, Mont Saint-Aignan, 76821, Fr.
SO Pure and Applied Chemistry (2006), 78(2), 321-331
CODEN: PACHAS; ISSN: 0033-4545
PB International Union of Pure and Applied Chemistry
DT Journal; General Review
LA English
AB A review. The role of 3-aminopyrrolidine lithium amides (3-APLi's) as chiral ligands for alkyllithiums (AlkLi's) is reviewed. Synthetic developments as well as NMR characterizations and computational interpretations have been simultaneously and complementarily conducted to improve the ligand design for a model reaction that is the condensation of AlkLi's on o-tolualdehyde, for which enantiomeric excesses up to 80% were obtained. This study describes the whole chain going from the synthesis of the chiral 3-aminopyrrolidines (3-APs) (18 different 3-APs synthesized) to the characterization of the noncovalent mixed aggregates resulting from the interaction between the organolithium partners (3-APLi:AlkLi). Finally, the docking of the aldehyde on one lithium of the aggregate was analyzed by theor. means on simplified models, in an attempt to understand the structure of the fully loaded pretransition complexes.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:145522 CAPLUS
DN 141:139856
TI Asymmetric reactions based on activation and structure control of molecule. Asymmetric reaction of lithiated nucleophiles
AU Tomioka, Kiyoshi
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Yoshida, Sakyo-ku, Kyoto, 606-8501, Japan
SO Yakugaku Zasshi (2004), 124(2), 43-54
CODEN: YKKZAJ; ISSN: 0031-6903
PB Pharmaceutical Society of Japan
DT Journal; General Review
LA Japanese
GI

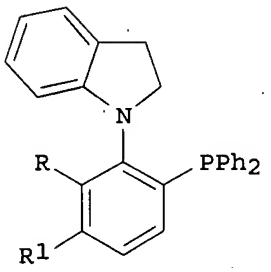


I

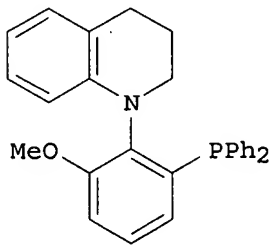
AB A review. The methodol. that we developed relies on an external chiral coordinating reagent that forms a deaggregated chelate complex with organolithium reagents. Under the pos. control of a chiral di-Me ether of

stilbenediol (I) 4, an asym. conjugate addition reaction of organolithium reagents with unsatd. imines and esters proceeded successfully to yield the corresponding addition products with reasonably high stereoselectivity. The sense of stereochem. is predictable based on a coordination model. The methodol. has been extended to a catalytic asym. 1,2-addition reaction of organolithium reagents with imines. An enantiotopic group differentiating the opening of cyclohexene oxide with organolithium was also mediated by a chiral ligand. The asym. Horner-Wadsworth-Emmons reaction of phosphonates and Peterson reaction of α-silylester with 4-substituted cyclohexanone were another successful extension of the methodol. A three-component reagent of lithium ester enolate, lithium amide, and chiral diether reacts with imines to afford β-lactam with reasonably high enantioselectivity. Tridentate aminoether ligands were also shown to affect the catalytic asym. addition of lithium ester enoaltes to imines, giving β-lactams with high enantioselectivity. Asym. conjugate addition of lithium amide to enolates was mediated by a chiral diether ligand to give the β-aminoester with high yield and enantioselectivity. The methodol. has been successfully applied to an asym. synthesis of biol. potent compds. Dihydrexidine, a promising anti-Parkinsonism candidate, and salsolidine, a representative isoquinoline alkaloid, have been synthesized using asym. addition reactions of organolithium reagents as the key steps.

L9 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:689599 CAPLUS
DN 139:381543
TI A C(aryl)-N(amine) bond atropisomeric aminophosphine: preparation and use as a ligand in a catalytic asymmetric allylic alkylation
AU Mino, Takashi; Tanaka, Youichi; Yabusaki, Toshihiro; Okumura, Daisuke; Sakamoto, Masami; Fujita, Tsutomu
CS Faculty of Engineering, Department of Materials Technology, Chiba University, Inage-ku, Chiba, 263-8522, Japan
SO Tetrahedron: Asymmetry (2003), 14(17), 2503-2506
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 139:381543
GI



I



II

AB (2,3-Dihydroindolyl)phenylphosphines such as I (R = MeO, Me; R1 = H; RR1 = CH:CHCH:CH) and (1,2,3,4-tetrahydroquinolyl)phenylphosphine II are prepared as potential atropisomeric phosphines for use as chiral ligands. I (R = Me; R1 = H) is resolved into its enantiomers by chiral HPLC on 100 mg scale. I (R = Me; R1 = H) racemizes by rotation about the hindered C-N bond with a half-life of 467 d at 25° in toluene, while I (RR1 = CH:CHCH:CH) and I (R = MeO; R1 = H) racemize with half-lives of 102 d and 0.59 d, resp., under similar conditions. (+)- And (-)-I (R = Me; R1 = H) are used as nonracemic phosphine ligands for the palladium-catalyzed allylic alkylation of di-Me malonate with

1,3-diphenyl-2-propenyl acetate to yield the allylic malonates (E,R)- and (E,S)-PhCH:CHCHPhCH(CO2Me)2 in 38-88% yields and in 74-91% ee. Crystal structures of I (R = Me, MeO; R1 = H) and II are obtained by X-ray crystallog. (no data).
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:635317 CAPLUS
TI Improved synthesis of tert-butanesulfinamide suitable for large-scale production
AU Weix, Daniel J.; Ellman, Jonathan A.
CS Department of Chemistry, University of California at Berkeley, Berkeley, CA, 94720-1460, USA
SO Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), ORGN-229 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69EKY9
DT Conference; Meeting Abstract
LA English
AB Chiral amines are key components of many pharmaceutical agents, materials, and catalysts. Since its introduction in 1997, tert-butanesulfinamide has proven to be a versatile chiral ammonia equivalent for the asym. synthesis of amines. In response to the high demand for tert-butanesulfinamide, an improved synthesis of tert-butanesulfinamide that overcomes the scalability problems of the previous syntheses has been developed. The key step is the catalytic asym. oxidation of the inexpensive di-tert-Bu disulfide starting material to tert-Bu tert-butanethiosulfinate. The new homogeneous reaction conditions utilize an inexpensive chiral ligand prepared in a single step from com. available cis-1-amino-indan-2-ol. The reaction is performed at a 2.3 M concentration in the practical solvent acetone and can readily be run on a kilogram scale. The thiosulfinate ester can then be easily converted to tert-butanesulfinamide by reaction with lithium amide.

L9 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:553171 CAPLUS
DN 139:260704
TI Overview of organolithium-ligand combinations and lithium amides for enantioselective processes
AU Hodgson, David M.; Stent, Matthew A. H.
CS Dyson Perrins Laboratory, Department of Chemistry, University of Oxford, Oxford, OX1 3QY, UK
SO Topics in Organometallic Chemistry (2003), 5(Organolithiums in Enantioselective Synthesis), 1-20
CODEN: TORCFV; ISSN: 1436-6002
PB Springer-Verlag
DT Journal; General Review
LA English
AB A review on the use of external chiral ligands in enantioinduction in organolithium processes, mainly in the areas of asym. addns. and enantioselective deprotonations.
RE.CNT 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:207629 CAPLUS
DN 138:370638
TI Improved Synthesis of tert-Butanesulfinamide Suitable for Large-Scale Production
AU Weix, Daniel J.; Ellman, Jonathan A.
CS Center for New Directions in Organic Synthesis, Department of Chemistry, University of California, Berkeley, CA, 94720, USA
SO Organic Letters (2003), 5(8), 1317-1320
CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:370638
AB An improved synthesis of tert-butanesulfinamide that overcomes the scalability problems of the previous syntheses is described. The key step is the catalytic asym. oxidation of the inexpensive di-tert-Bu disulfide starting material. The new homogeneous reaction conditions utilize an inexpensive chiral ligand prepared in a single step from com. available cis-1-amino-indan-2-ol. The reaction is performed at a 4 M concentration in the practical solvent acetone and can readily be run on a kilogram scale.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:113730 CAPLUS
DN 138:303914
TI Chiral ligand-controlled asymmetric conjugate addition of lithium amides to enoates
AU Doi, Hirohisa; Sakai, Takeo; Iguchi, Mayu; Yamada, Kenichi; Tomioka, Kiyoshi
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, 606-8501, Japan
SO Journal of the American Chemical Society (2003), 125(10), 2886-2887
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:303914
AB β-Amino esters are prepared enantioselectively in 61-99% yields and 73-97% ee by addition of lithium amides (generated from amines and butyllithium) to trans-α,β-unsatd. esters in the presence of (R,R)-1,2-dimethoxy-1,2-diphenylethane at -78° in toluene. The amount of amine added is important to assure high enantioselectivities; use of 1.5 equivalent of amine rather than 3.0 equivalent decreases the enantioselectivity of addition to tert-Bu trans-cinnamate from 93% ee to 82% ee. Chlorotrimethylsilane is an effective additive for enantioselective addition of lithium amides to unsatd. esters. In one case, use of 30 mol% of (R,R)-1,2-dimethoxy-1,2-diphenylethane as a nonracemic chiral ligand for the addition of lithium (trimethylsilyl)benzylamide to tert-Bu trans-cinnamate provided the corresponding β-amino ester in 75% yield and 70% ee.
RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:352076 CAPLUS
DN 131:130237
TI A novel chiral pentamine ligand for enantioselective α-alkylation of acyclic lithium amide enolates. Optimization of chiral ligands for asymmetric reactions using solid-phase organic synthesis
AU Matsuo, Jun-ichi; Odashima, Kazunori; Kobayashi, Shu
CS Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo Bunkyo-ku Tokyo, 113-0033, Japan
SO Organic Letters (1999), 1(2), 345-347
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
AB Using combinatorial chemical and screening of products for optimization of activity, a novel pentamine tetrapeptide ligand has been developed for enantioselective α-alkylation of simple acyclic lithium amide enolates. It has been demonstrated that solid-phase organic

synthesis provides a powerful and rapid method for finding efficient chiral ligands.
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:134079 CAPLUS
DN 128:217101
TI Enantioselective [2,3]sigmatropic rearrangement of α-propargyloxyacetic acids mediated by BuLi-(-)-sparteine complex
AU Manabe, Shino
CS Faculty Pharmaceutical Sciences, Univ. Tokyo, Hongo, Bunkyo-ku, Tokyo, 113, Japan
SO Chemical & Pharmaceutical Bulletin (1998), 46(2), 335-336
CODEN: CPBTAL; ISSN: 0009-2363
PB Pharmaceutical Society of Japan
DT Journal
LA English
OS CASREACT 128:217101
AB The [2,3]sigmatropic rearrangement of RC.tplbond.CCH2OCH2CO2H [R = heptyl, CH2CHMe2, CHMe2] to give (S)-CH2:C:CRCH(OH)CO2Me in 40-48% ee was achieved by the use of BuLi-(-)-sparteine complex in toluene. BuLi-chiral ligand complexes are stronger bases than lithium amides, so they are expected to be good mediators of this reaction.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1997:811868 CAPLUS
DN 128:114982
TI Ab initio theoretical study of 3-aminopyrrolidines lithium amides as chiral ligands for butyllithium
AU Fressigne, Catherine; Corruble, Aline; Valnot, Jean-Yves; Maddaluno, Jacques; Giessner-Prettre, Claude
CS Laboratoire des Fonctions Azotees et Oxygenees Complexes de l'IRCOF, Universite de Rouen, 76821 Mont St Aignan Cedex, UPRES-A 6014, Fr.
SO Journal of Organometallic Chemistry (1997), 549(1-2), 81-88
CODEN: JORCAI; ISSN: 0022-328X
PB Elsevier Science S.A.
DT Journal
LA English
AB DFT computations on 3-N-methylamino-N-methylpyrrolidine Li amide and its complex with methyllithium are reported. The results obtained fully support the norbornyl-like folding adopted by the pyrrolidine ring that was inferred from exptl. NMR data. The 6Li and 13C theor. nuclear magnetic shielding consts. are in reasonable agreement with the corresponding measured chemical shifts for parent compds. The comparison between exptl. and theor. results confirms that, for the 3-aminopyrrolidines exptl. studied, there is, in solution, a delicate balance between steric repulsions and aggregation forces. However, the model systems considered in this preliminary study are able to account for the energy scale of most of the different possible intermol. interactions but not for the driving forces at work in the aldehyde-Li amide condensation reaction.
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1994:482081 CAPLUS
DN 121:82081
TI Asymmetric synthesis mediated by chiral ligands
AU Koga, Kenji
CS Faculty Pharmaceutical Sciences, University Tokyo, Tokyo, 113, Japan
SO Pure and Applied Chemistry (1994), 66(7), 1487-92

CODEN: PACHAS; ISSN: 0033-4545
DT Journal; General Review
LA English
AB A review with 11 refs. Chiral chelated lithium amides were designed and synthesized and studies were carried out on the use of these lithium amides or the corresponding amines for enantioselective reactions such as deprotonation of prochiral cyclic ketones, kinetic resolution of racemic 2-substituted cyclohexanones by deprotonation, regioselective deprotonation of optically active 3-keto steroids, alkylation of achiral ketones, and deracemization of chiral ketones by protonation.

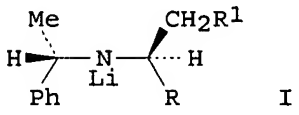
L9 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1993:408376 CAPLUS
DN 119:8376
TI Enantioselective conjugate addition to cyclic enones with scalemic lithium organo(amido)cuprates. Part IV. Relationship between ligand structure and enantioselectivity
AU Rossiter, Bryant E.; Eguchi, Masakatsu; Miao, Guobin; Swingle, Nicole M.; Hernandez, Amelia E.; Vickers, Denise; Fluckiger, Ezdan; Patterson, R. Greg; Reddy, K. Vasavi
CS Dep. Chem., Brigham Young Univ., Provo, UT, 84602, USA
SO Tetrahedron (1993), 49(5), 965-86
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English
OS CASREACT 119:8376
AB Scalemic lithium amides derived from primary and secondary amines react with organocopper compds. in ether or di-Me sulfide to form lithium organo(amido)cuprates capable of enantioselective conjugate addition to 2-cycloalkenones. The most successful heterocuprate, in which the chiral ligand is (S)-N-methyl-1-phenyl-2-(1-piperidinyl)ethanamine, (S)-MAPP; (I) reacts with cyclic enones to form products with up to 97% enantiomeric excess. Nonlinear asym. induction was observed with the cuprate formed from ligand I. Thus, a solution of CuI in Me2S was added to a solution of I and BuLi in Me2S to give a suspension of cuprate. Treating 2-cyclohexenone with the cuprate solution at -78° gave 60% (S)-3-butylcyclohexanone in 83% enantiomeric excess.

L9 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1993:6692 CAPLUS
DN 118:6692
TI New methods and reagents in organic synthesis. 89. Studies on reaction conditions and new entry to chiral ligands in the chiral lithium amide-mediated enantioselective aldol reaction
AU Ando, Akira; Tatematsu, Toshiaki; Shiori, Takayuki
CS Fac. Pharm. Sci., Nagoya City Univ., Nagoya, 467, Japan
SO Chemical & Pharmaceutical Bulletin (1991), 39(8), 1967-71
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
OS CASREACT 118:6692
AB Reaction conditions for the enantioselective aldol reaction of EtCOCMe3 and BzH using the chiral lithium amide (S)-Me2CHCH(CH2OMe)NLiCHMe2 (I) as a chiral auxiliary were thoroughly investigated. All three procedures, i.e., the combined use of LDA and the chiral lithium amide I, the use of an excess of the chiral lithium amide I, and the regeneration of the chiral lithium amide I, afforded the aldol (S,S)-PhCH(OH)CHMeCOCMe3 [(S,S)-II] in about 90% yield and 70% enantiomeric excess (ee). Investigation of the effects of solvent by utilizing 1-naphthaldehyde revealed that in THF, (S,S)-1-C10H7CH(OH)CHMeCOCMe3 [(S,S)-III] of 77% ee was obtained as the major product, while in ether (R,R)-III became the major isomer (38% ee).

Furthermore, addition of HMPA caused a dramatic change of stereoselectivity, and (S,S)-III of 70% ee was obtained in ether with 20 equiv of HMPA. The aldol (R,R)-II of 74% ee was obtained when the new chiral lithium amide (1S,2R)-PhCH(OMe)CHPhNLiCHMe2 was used.

L9 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1989:94621 CAPLUS
DN 110:94621
TI Enantioselective aldol reactions using chiral lithium amides as a chiral auxiliary
AU Ando, Akira; Shioiri, Takayuki
CS Fac. Pharm. Sci., Nagoya City Univ., Nagoya, 467, Japan
SO Journal of the Chemical Society, Chemical Communications (1987), (21), 1620-1
CODEN: JCCCAT; ISSN: 0022-4936
DT Journal
LA English
OS CASREACT 110:94621
AB The enantioselective aldol reaction of EtCOCMe3 with BzH in the presence of chiral ligands was thoroughly investigated. With the lithium amide derived from 2-(isopropylamino)-1-methoxy-3-methylbutane as chiral ligand, a chemical yield of 93% and 68% enantiomeric excess were realized.

L9 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1985:131605 CAPLUS
DN 102:131605
TI Enantioselective addition of n-butyllithium to benzaldehyde in the present of chiral lithium amides
AU Eleveld, M. B.; Hogeveen, H.
CS Dep. Org. Chem., Univ. Groningen, Groningen, 9747 AG, Neth.
SO Tetrahedron Letters (1984), 25(45), 5187-90
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
OS CASREACT 102:131605
GI



I

AB The reaction of BuLi with PhCHO in the presence of chiral lithium amides I (R = Ph, 2-pyridyl, 2-MeOC6H4, R1 = H; R = Ph, R1 = OMe) gives HOCHPhBu with optical yields ≤90%.

```
=> s lithium amide
        325716 LITHIUM
            370 LITHIUMS
        325844 LITHIUM
                 (LITHIUM OR LITHIUMS)
        130578 AMIDE
         82097 AMIDES
        178013 AMIDE
                 (AMIDE OR AMIDES)
L10       1488 LITHIUM AMIDE
                 (LITHIUM(W)AMIDE)

=> s alpha beta unsaturated carbonyl compound
       1693145 ALPHA
```

```
          2493 ALPHAS
       1693252 ALPHA
                 (ALPHA OR ALPHAS)
       1460741 BETA
          1325 BETAS
       1460818 BETA
                 (BETA OR BETAS)
         56956 UNSATURATED
             1 UNSATURATEDS
         56957 UNSATURATED
                 (UNSATURATED OR UNSATURATEDS)
        228182 UNSATD
            13 UNSATDS
        228185 UNSATD
                 (UNSATD OR UNSATDS)
        243085 UNSATURATED
                 (UNSATURATED OR UNSATD)
        175092 CARBONYL
         27670 CARBONYLS
        183368 CARBONYL
                 (CARBONYL OR CARBONYLS)
        122915 COMPOUND
        872009 COMPOUNDS
        977161 COMPOUND
                 (COMPOUND OR COMPOUNDS)
       1165677 COMPD
       1740256 COMPDS
       2490661 COMPD
                 (COMPD OR COMPDS)
       2929224 COMPOUND
                 (COMPOUND OR COMPD)
L11       1924 ALPHA BETA UNSATURATED CARBONYL COMPOUND
                 (ALPHA(W)BETA(W)UNSATURATED(W)CARBONYL(W)COMPOUND)

=> s L10 and L11
L12          3 L10 AND L11

=> s chiral ligand
        116143 CHIRAL
            16 CHIRALS
        116147 CHIRAL
                 (CHIRAL OR CHIRALS)
        322807 LIGAND
        219575 LIGANDS
        439244 LIGAND
                 (LIGAND OR LIGANDS)
L13       3787 CHIRAL LIGAND
                 (CHIRAL(W)LIGAND)

=> s L10 and L11
L14          3 L10 AND L11

=> s L13 and L14
L15          0 L13 AND L14

=> s beta aminoacid
       1460741 BETA
          1325 BETAS
       1460818 BETA
                 (BETA OR BETAS)
           209 AMINOACID
           183 AMINOACIDS
           376 AMINOACID
                 (AMINOACID OR AMINOACIDS)
L16          6 BETA AMINOACID
```

(BETA(W)AMINOACID)

=> s L13 and L16
L17 0 L13 AND L16

=> s L12 1-3 bib abs
MISSING OPERATOR L12 1-3
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d L12 1-3 bib abs

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:61435 CAPLUS
DN 138:320779
TI Lewis base catalyzed Michael reaction between ketene silyl acetals and .alpha.,β -unsaturated carbonyl compounds
AU Mukaiyama, Teruaki; Nakagawa, Takashi; Fujisawa, Hidehiko
CS Center for Basic Research, TCI, The Kitasato Institute, Tokyo, 114-0003, Japan
SO Chemistry Letters (2003), 32(1), 56-57
CODEN: CMLTAG; ISSN: 0366-7022
PB Chemical Society of Japan
DT Journal
LA English
OS CASREACT 138:320779
AB Catalytic Michael reaction between trimethylsilyl enolates and .alpha.,β -unsatd. carbonyl compds. by using a Lewis base such as lithium benzamide or lithium succinimide in a DMF solvent proceeded smoothly to afford the corresponding Michael adducts.
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1997:104679 CAPLUS
DN 126:199800
TI Asymmetric synthesis of β-amino acids via the Michael addition of chiral metal amides
AU Davies, Stephen G.; Ichihara, Osamu
CS Dyson Perrins Lab., Univ. Oxford, Oxford, UK
SO Yuki Gosei Kagaku Kyokaishi (1997), 55(1), 42-50
CODEN: YGKKAE; ISSN: 0037-9980
PB Yuki Gosei Kagaku Kyokai
DT Journal; General Review
LA Japanese
AB A review with 32 refs . A Li amide conjugate addition approach to the synthesis of β-amino acid derivs. is described. Li amides derived from α-methylbenzylamine undergo highly diastereoselective 1,4-conjugate addition to a variety of α ,β -unsatd. carbonyl compds. The benzyl substituents on the amino group can be readily removed by hydrogenolysis to afford a wide range of β-amino acid derivs. The enolate intermediate can be trapped by electrophiles such as alkyl halides and (camphorsulfonyl)oxaziridine to give α-alkyl and α-hydroxy-β-amino acids in a highly stereocontrolled fashion. The synthetic utility of the methodol. is demonstrated by the syntheses of nos. of natural products and other important synthetic intermediates such as taxol C-13 side chain, cispentacin, and (+)-negamycin. The origin of the stereoselectivity is briefly discussed.

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1973:515184 CAPLUS
DN 79:115184

TI Organoselenium chemistry. α-Phenylseleno carbonyl compounds as precursors for α,β-unsaturated ketones and esters
AU Reich, Hans J.; Reich, Ieva L.; Renga, James M.
CS Dep. Chem., Univ. Wisconsin, Madison, WI, USA
SO Journal of the American Chemical Society (1973), 95(17), 5813-15
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 79:115184
AB A synthetic method for the conversion of esters and ketones to their α,β-unsatd. derivs., such as cyclohexenones, is described. The procedure involves the reaction of the Li enolate of the carbonyl compound with PhSeBr to give an α-phenylseleno ester or ketone, followed by oxidation to the selenoxide. The selenoxide undergoes facile syn-elimination to form the α ,β -unsatd.
carbonyl compound The sequence, which is carried out at
or below room temperature, gives excellent yields for acyclic and for some cyclic esters and ketones.

=> d L16 1-6 bib abs

L16 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:862736 CAPLUS
TI New building blocks for the synthesis of conformationally restricted β-peptides
AU Moran Ramallal, Antonio; Gonzalez, Javier; del Pozo Losada, Carlos; Macias Rabanal, Alberto
CS Department of Organic and Inorganic Chemistry, Universidad de Oviedo, 33006 - Oviedo, Spain
SO Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, 2006 (2006), ORGN-595 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69IHRD
DT Conference; Meeting Abstract; (computer optical disk)
LA English
AB The development of new methodol. directed to the preparation of new types of conformationally-restricted β -aminoacids is a
very active field of research in organic synthesis. In our group we have been working on the preparation of β -aminoacids
α,α-disubstituted, bearing a heterocyclic ring with the final objective of preparing new types of β-peptides. The synthetic route involves the preparation of a spiranic β-lactam, through the ketene-imine cycloaddn. [2+2]-cycloaddn. reaction (Staudinger reaction), followed by the ring-opening. In order to achieve very-mild conditions for the ring opening of the β-lactam, we introduced the electron-withdrawing group Boc on the β-lactam nitrogen, and use KCN as catalyst. In this paper we describe the preparation of several types of β -
aminoacids using this methodol. The Staudinger reaction shows an excellent degree of stereocontrol, the reaction proceeds usually with good yields, and the compds. are obtained in an orthogonally-protected form.

L16 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:861385 CAPLUS
TI Yttrium(III) complexes: Highly active catalysts for ring opening polymerizations
AU Williams, Charlotte K.
CS Department of Chemistry, Imperial College London, London, SW7 2AZ, UK
SO Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, 2006 (2006), INOR-1000 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69IHRD
DT Conference; Meeting Abstract; (computer optical disk)
LA English
AB The chemical of poly(beta-aminoacids) has been

experiencing a renaissance in recent years due to the ability of these materials to mimic secondary structural features of peptides. They have found application as peptide mimetics in pharmaceuticals, anti-microbial surfaces and medicinal applications where they are particularly valued due to their resistance to peptidases and other hydrolytic enzymes. The single-step synthesis of these polymers, via the metal catalyzed ring opening polymerization of lactams is presented. The synthesis and characteriation of well defined yttrium(III) amide complexes are described and these species are highly active and controlled catalysts for the ring opening polymerizaiton of (S)-4-(Benzyloxylcaronyl)-2-azetidone. The polymerization kinetics and mechanism are studied and the catalysts are shown to
exert good polymerization control. The catalysts are also active for the ring opening polymerization of lactones and can be used to synthesize novel block copoly(ester-amides).

L16 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:693765 CAPLUS
DN 145:315252
TI A solution to the component instability problem in the preparation of peptides containing C2-substituted cis-cyclobutane β - aminoacids: synthesis of a stable rhodopeptin analog
AU Roy, Olivier; Faure, Sophie; Aitken, David J.
CS Laboratoire SEESIB-CNRS, Departement de Chimie, Universite Blaise Pascal, Clermont-Ferrand II, Aubiere, 63177, Fr.
SO Tetrahedron Letters (2006), 47(33), 5981-5984
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier B.V.
DT Journal
LA English
OS CASREACT 145:315252
AB Despite the inherent instability of C2-substituted cis-cyclobutane .beta.-aminoacids, incorporation of such residues into peptides is shown to be possible through use of a 1-amino-2-(hydroxymethyl)cyclobutane derivative as a stable β - aminoacid surrogate. This synthetic strategy was validated by the synthesis of a rhodopeptin analog.
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:124735 CAPLUS
TI Enzymatic resolution of cyclic N-Boc protected β - aminoacids [Tetrahedron: Asymmetry 15 (2004) 3407]
AU Pousset, Cyrille; Callens, Roland; Haddad, Mansour; Larcheveque, Marc
CS Laboratoire de Synthese Organique, ENSCP, CNRS, Paris, 75231 05, Fr.
SO Tetrahedron: Asymmetry (2005), 16(3), 745
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier B.V.
DT Journal; Errata
LA English
AB Unavailable

L16 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:522188 CAPLUS
TI Solution NMR and x-ray crystal structures of new chiral 1,4-oxazepinium heterocycles from 2,4-pentanedione
AU Lozada, Concepcion
CS Instituto de Quimica, UNAM, Coyo, Mex.
SO Abstracts, 36th Middle Atlantic Regional Meeting of the American Chemical Society, Princeton, NJ, United States, June 8-11 (2003), 319 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69EBDT
DT Conference; Meeting Abstract
LA English

AB The reaction of 2,4-pentanedione 1 with (R)-(-)-2-phenylglycine Me ester 2, (R)-(-)-2-phenylglycinol 3 and the proteinogenic aminoacids (2S,3R)(-)-2-amino-3-hydroxybutyric acid (L-Threonine) 4, and (R)-(-)-2-amino-3-mercaptopropionic acid (L-cysteine) 5 Me esters was investigated. The corresponding enamines 6, 7, 8 were isolated and characterized spectroscopically while 9, unstable, was transformed in situ into 13. Furthermore, treatment of 7, 8 and 9 with Boron trifluoride etherate, afforded the new [1,4] oxazepines 10, 11, and [1,4] thiazepine 12 as their BF3O- salts. The structure of enamines and their corresponding seven member heterocycles was assessed by 1D and 2D NMR spectroscopy and by X-ray crystalog. detns. Variable temperature expts. showed different mol. mobility among these heterocycles. As a part of our studies with β-diketone compds. of natural origin, it became necessary to explore the reactivity of this chemical functionality with some α-L-amino acid Me esters and other chiral compds. i.e. (R)-(-)-2-phenylglycinol. Such reactions have led at a first step to the corresponding enamines; resulted from the nucleophilic attack of the primary amine function to 2,4-pentanedione at room temperature in CH2Cl2, with Me esters of β -aminoacids. Resulting products further were transformed into the corresponding seven-membered heterocycles, upon treatment with boron trifluoride etherate at room temperature
The NMR spectra of these heterocycles are distinct and uniquely associated with each of these structures.

L16 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1906:103540 CAPLUS
DN 0:103540
TI Synthesis of thymine and other uracils
AU Fischer, Emil; Roeder, George
SO Sitzungsberichte der Akademie der Wissenschaften in Berlin (1901), 12, 268-76
From: J. Chem. Soc., Abstr. 80, I, 294-5 1901
CODEN: SAWBEB
DT Journal
LA Unavailable
AB Hydrouracils may be produced either by the interaction of potassium cyanate and the salts of the esters of β -aminoacids , or by heating carbamide with an unsaturated acid. The preparations of 4-methyldihydrouracil, ethyl β-aminobutyrate, bromo-4-methyldihydrouracil, methyluracil, and 5-methyldihydrouracil are discussed. Their characteristics are also described.

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